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ABSTRACT

Three joint international seminars on governmental roles in organizing and promoting educational research and development were held as part of a study conducted by the Centre for Educational Research and Innovation (CERI) of the Organisation for Economic Cooperation and Development (OECD). This document contains the proceedings of the third seminar, held in Vienna, Austria, on October 5-7, 1994. It reviews the educational research-and-development policy frameworks of Austria, Germany, and Switzerland, examines major similarities and differences in research and policy cultures, and compares them with the approaches to educational research and development in other member countries. The three countries appear to be coping with fairly similar problems: the dispersion and discontinuity of research effort, unnecessary duplication of research, counterproductive rivalries among institutions, and lack of coherence and of proximity to educational practice. Following the introduction, Torsten Husen reviews the factors for the differences in organization and roles in the three countries. In chapter 3, Karl-Heinz Gruber identifies commonalities and variations among the three countries and questions usage of the term "research-and-development model." Chapters 4-6 present executive summaries of the country case studies by Lorenz Lassnigg, Hans Pechar, Brigitte Steinert, and Armin Gretler. In chapter 7, Ivor Pritchard argues that OECD countries should carefully design and implement an educational research-and-development policy that is coherent and adaptable. Appendices contain the conference agenda and list of participants. (Contains 29 references.) (LMI)

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Educational Research and Development

Austria, Germany, Switzerland

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Educational Research and Development

Austria, Germany, Switzerland

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Foreword

Three joint international seminars on governmental roles in organising and promoting educational R&D were held as part of a study undertaken since 1992 by the Centre for Educational Research and Innovation (CERI) of the OECD. The first took place in Washington, D.C. in June 1992 and the second in Sunne, Sweden in May 1993. The third seminar in the series was held in Vienna, 5-7 October 1994. It was jointly organised by CERI, the Austrian Federal Ministry for Education and Arts, and the Austrian Federal Ministry for Science and Research, with the full co-operation and support of the authorities of Germany and Switzerland.

This document assembles the proceedings of the Vienna seminar. It reviews the educational R&D policy frameworks of the three principal countries investigated, Austria, Germany and Switzerland, examines major similarities and differences in research and policy cultures, and compares them with the approaches to educational R&D in other Member countries.

The chapters represent the views of the contributors and do not necessarily reflect those of the OECD or of its Member countries. This report is published on the responsibility of the Secretary-General of the OECD.

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CHAPTER 1. THE VIENNA SEMINAR IN CONTEXT

by
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The purpose of this brief opening chapter is threefold. First, by describing the background and aims of the CERI study on trends and issues in educational R&D, the chapter seeks to place the Vienna seminar in a wider context. Second, the chapter explains the purpose of the seminar and sets forth the main hypotheses that guided its design. Third, some tentative conclusions are presented.

Background of the study

The CERI study on educational R&D has its roots in the November 1990 high-level meeting of the OECD Education Committee, when Ministers identified the importance of educational R&D in contributing to school improvement and innovation. While indicating a generally favourable attitude to R&D in education, Ministers also expressed concern that its potential benefits in realising improvement had not been fully achieved.

The Ministers' discussion was followed up in 1991 by Mr. Christopher Cross, the CERI Board member from the United States Department of Education suggesting that it might be appropriate for CERI to launch a study to investigate recent trends and issues in educational R&D in the OECD area and, particularly, to study the role of governments in organising and supporting R&D. The United States offered to host a first joint international seminar in Washington, D.C. in June 1992, with the purpose of examining the questions that might usefully be addressed in a comparative study (OECD, 1994). Based on the deliberations of the national delegates and experts who attended this first meeting, a proposal to initiate a specific study on R&D was prepared by the Secretariat and endorsed by the CERI Governing Board in the autumn of 1992. It was agreed that the broad purpose of the study would be to examine, by means of country case studies, expert meetings and international seminars, the role of OECD governments in organising educational R&D and, particularly, the links between educational research and educational policy making.

Regionalisation of educational research

During the Washington seminar, delegates and experts noted a number of similarities and differences in the position, problems and future prospects of educational R&D in the

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participating countries. In some mainly European countries, R&D continued to be given high priority and support, and few critical questions were raised about its relevance, efficiency and effectiveness. In other countries, notably Australia, the Netherlands and the United States, policy-makers were seen to be keenly interested in reviewing and, if required, reforming the infrastructure for educational R&D.

Differences in the patterns and extent of government involvement, as well as apparent differences in the expectations of what R&D might contribute to the understanding of educational problems, to informed decision-making and to improved practice, were seen to be related to the particular circumstances of time and country. Although a large number of commonalities were also noted, major differences among the countries in terms of, for example, the level of resource investment or the responsiveness of educational researchers to the concerns expressed by policy-makers and practitioners, were thought to be the result of several factors which establish a context within which R&D resides. Three conditioning factors were believed to be especially important:

- the political culture of a country;
- its policies and agenda for education;
- its intellectional traditions and research cultures.

These assumptions about the possible relationships of educational R&D to models of government, changing policy trends and concerns, and the intellectual inheritance of academic cultures, constituted a conceptual framework for the organisation of the second and third international seminars which were hosted by the Swedish and Austrian authorities. Both seminars were designed to allow comparisons to be made on three levels, extending from the national level to interregional and wider international perspectives.

The second seminar, held in Sunne, examined the hypothesis that there exist certain characteristics that define a distinctly "Nordic" model of educational R&D, a model that stands in clear contrast with North American and Central European approaches. Important commonalities in political structures, policy agendas and priorities, as well as in intellectual traditions and academic orientations, were expected to have resulted in pressure for a convergence in the educational R&D cultures of Sweden and Norway, and to a lesser extent also in Denmark and Finland. In order to explore this hypothesis, the Sunne seminar was designed to bring out the regional similarities and differences and to compare these with approaches implemented elsewhere. As expected, the papers prepared for the seminar pointed to a large number of similarities, on specific dimensions, between sets of Nordic countries (Kogan, 1995). These common elements and the existence of a well-developed tradition of Nordic research collaboration notwithstanding, the hypothesis of a common R&D model could not be confirmed in the analysis, since the differences in approache to educational R&D taken by Norway and Sweden were arguably too significant (Eide, 1995).

Purpose of the Vienna seminar

The insights contributed by the Washington seminar and the tentative conclusions derived from the Sunne seminar were explored further during the third and last in the series, which was hosted by the Austrian federal authorities in the Schloss Wilhelminenberg in Vienna on 5-7 October 1994.

The Vienna seminar was designed to facilitate the comparative analysis of educational R&D approaches in national, interregional and wider international perspectives (see Agenda, Annex 1). The purpose was to shed further light on the hypothesis concerning the existence of distinct R&D systems or models that are anchored in common political, social and cultural contexts. The main objectives of the seminar were as follows:

- to review problems and issues and an analysis of recent and emerging trends in educational R&D in each of the three principal countries: Austria, Germany and Switzerland;

- to conduct a comparative analysis of similarities and differences in the approaches to educational R&D by the governments of the three countries, in particular as regards the organisation, funding and utilisation of educational R&D;

- to undertake a critical analysis of the specificity and commonality of the problems, issues and approaches to educational R&D in the three countries, in particular as compared with emerging issues in other OECD countries, not least with the United States and the Swedish/Nordic approaches that were examined previously.

Convergences and divergences in R&D cultures

Anticipating the conclusions offered by the Rapporteur in the final chapter, it may noted that the Vienna seminar contributed to a broadening of perspectives in several ways. First, it contributed new understanding of the common as well as distinctive features of educational R&D in each of the three countries. Second, important differences in the intellectual heritages and academic cultures of the three countries compared with other regions within the OECD area were underlined.

The three countries appeared to be coping with fairly similar problems. Noted were the dispersion and discontinuity of research effort, unnecessary duplication of research, counterproductive rivalries among institutions, and lack of coherence and of proximity to educational practice. While some of these problems were shared with other OECD countries (Nuttall, 1994), specific dimensions appeared to relate to the distinct patterns of federal organisation, institutional differentiation and the constellation of power relationships among interested constituencies in Austria, Germany and parts of Switzerland.

A striking common feature was that belief in the adequacy of an instrumental and mechanistic interpretation of the role of educational R&D was played down. The emphasis was on the need for reflection rather than immediate action. Clear indications emerged in all

the countries that the findings of research could only to a limited extent be applied in a linear fashion to the solving of problems of policy and practice.

Given these similarities, it came as a surprise to some participants that there appeared to be few institutional links for research collaboration among the three countries and also between these countries and other OECD regions.

Then there were the differences. In the case of Austria, critical questions were raised about the lack of capacity for planning resource allocation to educational R&D. For example, the adequacy of the functional division into separate provisions for research on schools, research on higher education, and research on vocational and technical education was called into question. In a framework for lifelong learning the challenge is to overcome these divisions and to set overarching priorities that promote coherence. This, in turn, would presuppose a facility for the co-ordination of research. The need for co-ordination was underlined by the finding that up to 99 per cent of all expenditure on educational R&D came from public sources, which raised the issue of accountability.

Accountability was an issue also in the Federal Republic of Germany, albeit for partly different reasons. Several indications emerged of the relevance and efficiency of university-based educational research being in need of improvement. Low productivity in this sector was partly attributed to the great extent of freedom enjoyed by university-based researchers when deciding about research priorities and objectives. A suggested remedy was to strengthen quasi-markets for research, for example by setting up competitive models of steering by resource allocation and realised outputs.

In the case of Switzerland, questions were asked about the balance between basic and applied research, whether priorities should be set more clearly and with a longer time span than is currently the case, and whether efficiency could be improved by systematising the R&D infrastructure across language zones. On balance, however, the discussion of the Swiss case pointed to possible ways of addressing common problems. The Swiss Co-ordination Centre for Research in Education and the recently created Swiss Co-ordination Conference on Education Research were seen as useful instruments for bridging the distance between the different communities, strengthening the relevance of research to policy and practice, overcoming fragmentation and incoherence, and improving resource planning for the development of educational research. The pragmatic approach taken by the Swiss was seen as a possibility worth contemplating by the Austrian and German participants.

Organisation of this volume

Following this introduction, Torsten Husén, in Chapter 2, reviews the factors that may explain the observed differences with regard to organisation and roles between countries and regions. Depending upon the cultural, political and economic contexts, four factors are seen as especially important: the degree of centralisation of the educational system; the location of educational research activities, the style of communication between researchers and policy-makers, and the expectations of the different interest groups involved in educational R&D.

Karl-Heinz Gruber, in Chapter 3, mentions a number of important commonalities of educational R&D in Austria, Germany and parts of Switzerland. The author also notes a number of significant national variations. In light of these, the author poses the question of whether it is useful to employ the term "R&D model" or even to consider the existence of a distinctly German type of R&D "system". Possible answers to this question are considered, and explored more fully in the concluding chapter.

Chapters 4, 5 and 6 bear witness to the problems associated with the concepts of R&D "model" and "system". These chapters present brief executive summaries of the very extensive country reports that were distributed to most participants before the meeting. The reports were prepared under the auspices of the relevant authorities of each country. The Austrian case study was written principally by Lorenz Lassnigg and Hans Pechar, the German study by Brigitte Steinert and the Swiss study by Armin Gretler. In all three cases the original reports were written in the German language (Austria, 1994; Germany, 1994; Switzerland, 1994).[1] The assembled evidence shows that educational R&D in Austria, Germany and Switzerland -- as in other OECD countries -- is a minor business in a very big enterprise.

Finally, Ivor Pritchard, the Rapporteur, observes in Chapter 7 that the German-speaking countries and territories are only loosely coupled, and that there does not appear to be a regional model of educational R&D in either Austria, Germany or Switzerland. Since even the notion of educational research is defined and interpreted differently in the three countries, there can be no such thing as a distinct "German approach" to educational R&D. The implication of the absence of clear regional models of educational R&D in the OECD area is, in this CERI study, that great care must be taken in formulating the lessons for governments in designing and implementing an educational R&D policy which is coherent and yet can be adapted to suit different circumstances and conditions.

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[1] The German-language original country reports of Austria, Germany and Switzerland can be obtained from the Austrian Federal Ministry for Science and Research, the German Federal Ministry of Education and Science, and the Swiss Co-ordination Centre for Research in Education.

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CHAPTER 2. POLICY-ORIENTED EDUCATIONAL RESEARCH AND DEVELOPMENT: AN INTERNATIONAL PERSPECTIVE

by
Torsten Husén
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As a way of introducing this subject, let me begin with a bit of historical and at the same time personal background. It is also a way of establishing my credentials in talking about educational R&D in Europe and the United States. I have been associated with educational research in general and policy-oriented research in particular for more than half a century. It began in the early 1940s with studies in educational psychology which led to surveys to assess the size of the so-called reserve of ability. How many in an age group were, according to their test scores, on a level that made them capable of attaining what in the German-speaking countries is referred to as the *Abitur*, but did not have the opportunity, mainly due to their social background, to enter academic secondary education?

Educational research with policy relevance began in my home country, Sweden, in the 1940s at the initiative of two so-called royal commissions. The shared belief was that educational psychology could come up with answers to central problems in education. This belief was part of the social engineering syndrome.

I was confronted on the international scene with research on central problems in education in 1952 when I was invited by the American High Commissioner to participate in a workshop on "*Moderne Psychologie und das deutsche Bildungswesen*". The sessions took place at the newly opened *Hochschule für Internationale Pädagogische Forschung*, set up jointly by the Americans, the *Land* of Hesse and the city of Frankfurt. The workshop was in fact the first major project conducted at the Institute. Leading German educators, among them some 20 professors of education, *Ordinarien* at universities or at *Pädagogische Hochschulen*, participated in the six-week exercise. A dozen experts from the United States and other European countries (Austria, Denmark, the Netherlands, Norway, Sweden and the United Kingdom) were also participating as experts after a week of briefing. Educational issues at different stages of the German school system were presented and the workshop participants then tried to sort them into various categories that lent themselves to systematic research approaches.

I became closely involved in Sweden in research pertaining to the reform issues from the mid-1950s onwards. Those of us in charge of various projects were expected to provide a knowledge base for policy-makers with regard to the structure and curriculum of the

comprehensive school (*Einheitsschule*) introduced in an increasing number of municipalities on a pilot basis in the 1950s and legislated for the entire country in 1962, to be implemented before the end of the decade.

Intergovernmental bodies like the Council of Europe tried to draw upon our experiences by organising a seminar on issues of differentiation and guidance. At the annual meeting of the American Educational Research Association in 1965 I was invited to give a plenary lecture on "A Case Study of Policy-Oriented Research -- The Swedish School Reforms", published in *The School Review* in the same year. Until then, shortly before the Elementary and Secondary Education Act was passed by Congress, research that was explicitly conducted in order to be used by policy-makers at the national or even state level was seldom heard of in the United States. It was long before the National Commission on Excellence was appointed and, in referring to policy-relevant research, came up with recommendations for reform.

In the early 1960s I was invited to join the *Wissenschaftliche Beirat* of the Max-Planck-Institut für Bildungsforschung in Berlin. The leading people in the institute, such as Hellmut Becker, Friedrich Edding and Dietrich Goldschmidt, became instrumental in the German *Bildungsrat*, which played an important role in reforming school education. Hopes were running high about what educational research would be able to do to improve school education. But some policy-makers at least were in for a disappointment. I remember flying in to Bonn from an international meeting in the early 1970s with Hans Leussinck, a former metallurgy professor at the Technische Hochschule in Karlsruhe. Our conversation was about what research could do. I apparently stepped on an aching toe because Leussinck almost exploded by saying, "*Diese Leute haben gar nichts geleistet*" ["These people (the researchers) have produced nothing at all"].

Let me try to give in a nutshell the development of educational R&D in the United States, which I have followed since the 1950s.

Until 1965, the US Office of Education had a co-operative research programme which had $6 million at its disposal. Individual researchers or research institutions submitted proposals which were referred to experts for evaluation before decisions were taken. "Project Talent", under John Flanagan's leadership, was perhaps the most spectacular project during these years when public money for R&D was scarce. The Ford Foundation and other foundations contributed more. But the situation changed drastically through the ESE Act when some $150 million, most of it for R&D centres, became available. At the same time, expectations were high as to what could be achieved in terms of school improvement with the increased funds. The optimism was aired in, for instance, Francis Keppel's book, *The Necessary Revolution in American Education* (1966). By giving generous resources to an R&D centre which could focus its research on a certain problem area, such as evaluation or teaching, the hope was that these efforts would result in guidelines for considerable school improvement. Those who had what at least they themselves regarded as good ideas could get planning grants for meetings where leading and prestigious people in a particular field were brought together for a couple of days of brainstorming. I remember such a meeting in Monterey, California, in 1966 when, for instance deans from leading schools of education from the East coast were flown in for a discussion meeting.

Since the early 1980s, I have given quite a lot of time and thought to studies and analyses of the relationships between educational research and policy making. My studies have mainly focussed on two problems:

- To what extent can research be geared to provide answers to *specific* policy questions of the type, "At what age would it be appropriate to introduce the first foreign language in school?" A related task for research is to widen the horizon and serve as enlightenment.

- How can outcomes of research be communicated to policy-makers?

The first major outcome of these studies was published in 1984 (with Maurice Kogan) in the edited volume *Educational Research and Policy: How do they relate?* (Oxford: Pergamon Press). The studies were conducted on a comparative basis and comprised four countries: Germany, Sweden, the United Kingdom and the United States.

In the meantime, my perspective on how research was related to policy became widened by my chairmanship of the Governing Board at the International Institute for Educational Planning in Paris. At this institute, training of planners and researchers were parallel to each other. I then noted that the reported outcomes of research conducted in Third World countries were miniscule in comparison with those published in the United States and Europe. As co-editor-in-chief of the *International Encyclopedia of Education*, I have found that almost 95 per cent of the research publications are from the first two regions and, leaving Japan aside, the rest of the world contributes with a tiny fraction of 2-3 per cent. Lack of professional resources was throughout a major problem. For instance, in a Latin American country I found a research institute with a staff of some 50 researchers which was completely absent from all bibliographical sources.

In the 1980s I became involved in helping to build competence in empirical research in education at the Chinese Central Institute for Educational Research in Beijing. The institute had been set up directly under the Ministry in the 1950s. It had, however, been closed during the cultural revolution and converted into a tobacco factory. The staff had been sent out to do hard work in the countryside. Those who survived and returned when the institute was reopened after more than a decade had in many cases to rely on the training they had long ago received in Moscow, which often consisted in acquiring competence to swallow Marxist theory and despise empirical facts. The latter was of course crucial when for instance the institute came to conduct large-scale evaluations of schools. China later decided to participate in the IEA cross-national surveys in science. The staff did a remarkably good job in the second international science survey in 1984 and is with strengthened competence in full swing preparing for the Third International Mathematics and Science Study (TIMSS).

Educational R&D varies considerably with regard to organisation and roles between countries and regions, depending upon the cultural, political and economic context. The following circumstances are important:

- The degree of *centralisation* of the educational system. In some countries, for instance the United States, a national policy in education is a novelty. Schools have traditionally been run by local communities, with the state serving as an overseer and provider of

some funds. But the federal government does not have a constitutional mandate to busy itself in local school affairs. This may now be changing in the United States, with a National Commission of Excellence having been established in the early 1980s and with the setting of voluntary standards in education. Behind this lies, of course, the notion that education is the main factor in international trade and industrial competition. The launching of national assessments in decentralised countries, such as the United States and the United Kingdom, is another indicator of the eagerness to compete.

- The *location* of educational research activities. There are two different types of location: the Ministry of Education (or one of its agencies) or the universities. I have already mentioned that in China, policy research is conducted within a governmental agency directly under the Ministry. This was also until recently the case in some East European countries. Another model was to accommodate research under the auspices of an Academy of Education as part of the state structure, which was the case in the Soviet Union and the former German Democratic Republic. The enormous increase in research resources which were made available by the Elementary and Secondary Education Act in the United States during the Johnson administration was to a large extent given to R&D centres at some of the leading universities. Other resources were used for regional laboratories. But it was the then US Office of Education in Washington, DC that took the final decision about appropriations.

- The style of *communication* between researchers and policy-makers. How far apart are they and how do they get in contact with each other? How can outcomes of research be made available, considering the fact that policy-makers do not have time to read research reports. At best, they have at their disposal so-called policy analysts who read and digest the main points for them. Let me give a few examples:

  - It appeared to me in the 1950s and 1960s to be rather self-evident that my contacts with the Swedish Minister of Education were either directly over the lunch table or in his role as chairman of the Royal Commission. The Commission invited me and my co-workers to appear before them and give oral reports before submitting final written reports. The outcomes of our studies were then discussed with the entire Commission. Such direct contacts can facilitate the use that is made of research findings, and help avoid misunderstandings.

  - My Egyptian colleague A.A. El Koussy, after completing his Ph.D. in London, became advisor to the Egyptian Government. One day he was called to the Minister who wanted his advice about the introduction of the first foreign language in secondary school. At what age should that take place? My colleague explained to the Minister that the matter would have to be investigated through a pilot experiment; students would have to be followed for at least one academic year; the analysis of data and reporting would take another half year. The Minister, however, replied that a decision had to be taken within the next six months!

  - This relates to another problem, namely that research takes time and cannot necessarily be geared to give answers to specific policy questions such as the one above. It is in the nature of research that it can yield unexpected outcomes which

could have bearings upon quite other problems than the ones that inspired its setting up.

- A last point concerns the *expectations* and *promises* made by the researchers themselves. Educational research has been seriously hurt by overpromising on the part of researchers. Modesty and restraint in these respects are therefore called for, all the more so because there is a risk that, oriented towards day-to-day issues, researchers become tied to governmental decisions and institutions.

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CHAPTER 3. COMPARATIVE COMMENTS ON EDUCATIONAL RESEARCH AND DEVELOPMENT IN AUSTRIA, GERMANY AND SWITZERLAND

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Definition of educational research

German educational terminology has no equivalent for the relatively clear and simple terms "educational research" or "recherche en éducation". In German, "educational research" may appear as *Erziehungswissenschaft*, *Bildungswissenschaft* and *Unterrichtswissenschaft* (all three also used in the plural); *empirisch-pädagogische Forschung*, *(empirische) Bildungsforschung* and *Unterrichtsforschung*; *Lehr/Lernforschung*, *Schulforschung* and *schulische Sozialisationsforschung*. The scope of these concepts varies and in all three countries usage is often determined by personal preference or epistemological inclination (Criblez, 1991, gives an illustration of this problem by showing how a Swiss journal translated a French article entitled "Pourquoi la recherche en éducation?" into the German "Wozu Erziehungs- und Bildungswissenschaft?").

However, over the past 20 years consensus has been growing to use *Bildungsforschung* in the narrow sense, thereby signalling a departure from traditional pedagogics. Two definitions formulated by powerful national research bodies in the early 1970s indicate the new self-concept and role of *Bildungsforschung*. The Swiss Science Council stated in 1973:

> "Educational research (*Bildungsforschung*) is preoccupied with the theoretical and empirical analysis of teaching and learning processes in all age-groups and in all spheres of human life. It is based on pedagogics but also on several other disciplines such as psychology, sociology, economics, political science and jurisprudence" (SGBF, 1988).

Two years later the German Education Council came forward with a similar concept:

> "However wide or narrow one draws the boundaries of educational research, one should only speak of educational research if the problem under investigation relates theoretically and empirically to educational processes (teaching, learning and socialisation), their organisational and economic preconditions or their reforms" (Deutscher Bildungsrat, 1975).

In both instances the constitutive features of educational research are:

- its focus on the "reality" of education, i.e. its structures and processes and their societal context;
- the emphasis on the generation of empirical data and the grounding of theories whenever possible on facts; and
- interdisciplinarity which deliberately crosses the boundaries of traditional pedagogics.

Common features of educational research

What are common features of educational research in Germany, Austria and the German-speaking part of Switzerland which would justify a view of this group of countries as a specific regional educational research "culture", distinguishable from a "Scandinavian", "French" or "British" approach? Keeping in mind the greatly differing size of the three countries, their respective educational research systems and other important social, political, economic and cultural national idiosyncracies, a number of specific shared traditions and orientations can be identified:

- the extraordinarily *rich and differentiated heritage of German 19th and early 20th century educational philosophy* whose hallmarks are a preoccupation with historical and "systematic" questions, a certain detachment from the "real world" of education, and strong intellectual lines of demarcation between the sphere of education and the claims of society and the economy;
- the *relative lateness of the paradigmatic shift* which transformed the predominantly philosophical-speculative academic discipline of "pedagogics" (*Pädagogik*) into a methodologically pluralistic "educational science" (*Erziehungswissenschaft*) with *Bildungsforschung im engeren Sinn* (educational research in the narrow sense) as a special sub-system. The empirical approach is, however, still underdeveloped, and large-scale surveys and longitudinal studies (*macro-pilotage*) are scarce (Mitter, 1985; SGBF, 1990; Fend, 1990; Thonhauser, 1992);
- stronger *reservations about the measurability of educational phenomena and scepticism vis-à-vis testing* and the evaluation of educational performance and outcomes than in most other OECD countries;
- a common pattern of expansion, institutionalisation and diversification of educational research in the wake of the *explosion scolaire* since the 1960s which, in the 1990s, has reached a stage frequently described as "consolidation" (Macke, 1990; Weishaupt *et al.*, 1991);
- after the "great expectations and mixed performance" of the short renaissance of school reform from the mid-1960s to the mid-1970s, a growing disenchantment and alienation

between academic educational research and the political/administrative system (Becker, 1984);

- a *retreat from politically controversial issues* -- comprehensive schools in particular -- towards new concerns such as the quality, multiculture, autonomy and organisational development of educational institutions;

- a "division of labour" between university-based research which sets its own research agenda and administratively controlled non-university research institutions. The drifting apart of these two sectors, a loss of "practice relevance" of the former and a lack of critical self-reflection of the latter could be serious side-effects;

- *a high degree of legal and administrative control (Verrechtlichung)*, a situation where innovations and change have to be legitimised by political or administrative bodies which to a certain degree serve as "filters" both for research generation and research utilisation and leave little scope for "professional autonomy" and research-based "grass--roots development" (Tillmann, 1991; Gruber, 1992);

- in marked contrast to most other OECD countries, the three German-speaking countries retain *early selection for academic secondary education*, and the institutional separation of general and vocational education -- a fact which for many educationists in Germany and Austria, perhaps less so in Switzerland, epitomises the failure of the so-called *Bildungsreform* of the 1960s and 1970s and the inability of educational research to overcome political convictions and influence policy formation (Fend, 1990; Weishaupt, 1992);

- *the bonding and professional socialisation of educational researchers* in the three countries is strengthened by the fact that most of the major educational publishers and important journals are West German. The biannual congresses and section meetings of the Deutsche Gesellschaft für Erziehungswissenschaft -- the most important and influential professional association comparable to the AERA -- are occasions when research agendas are defined and the corporate identity of the discipline reasserted (there is, however, less crossnational career mobility among Swiss, Austrian and German educational researchers than might be expected in the absence of a language barrier and given the common intellectual traditions and academic career patterns);

- finally, indications of a "second realistic turn", triggered off by:

  - a series of comprehensive national self-appraisals of the educational research system, first (SGBF, 1988) in Switzerland where it was transformed into an impressive Swiss masterplan for educational R&D, then (Weishaupt *et al.*, 1991) in Germany, and now, as a "by-product" of this OECD seminar, a similar examination in Austria;

  - sober reassessments of the interaction between educational research, policy making and practice by the small but growing number of German educational policy analysts (Zedler, 1985; Tillmann, 1991; Rolff, 1993).

Supranational fate of educational research

Whether these commonalities suffice to make the German-speaking countries a special case is of course open for debate because in many other respects they share the supranational fate of educational research and the problems of other OECD countries:

- the low (if not diminishing) level of public funding of educational R&D in relation to the size and overall expenditure of the education sector and to other areas of public spending. Among the explanations offered for this "underfunding" are the general economic retrenchment of the 1980s and the loss of the priority status which education had in public policy in the 1960s and 1970s (Switzerland seems to be an exception at present) (Nuttall, 1994);

- the reduced public trust in the value and usefulness of educational research, partly a reflection of a general erosion of society's confidence in the problem-solving capacity of scientific expertise, partly resulting from the view held by policy-makers and practitioners that many educational research findings are "inapplicable" or "irrelevant";

- the strained relationship between the so-called "two cultures" (Husén and Kogan, 1984) -- researchers on the one hand and policy-makers on the other (one could well speak of "three cultures" by bringing in practitioners). The "distance" and the difficulties in interaction between these three groups are often interpreted with reference to their respective constraints and time-frames, their different "languages" and professional socialisation, their different exposure to the "client" and political pressure;

- the low utilisation of research by both policy-makers and practitioners seems to have many causes: its limited impact vis-à-vis entrenched political convictions and established routines; insufficient brokerage and lack of systematic communication; too much "hit-and-run" research commissioned by policy-makers and administrators; and too little research initiated by practitioners and conducted close to the "grass roots" (newer studies suggest that "impact" and "utilisation" should not be seen as linear and one-dimensional but as a complex and diffuse process of enlightenment);

- much of educational research still lacks sophistication and coherence, is highly context-bound, and conducted within the conventions of national research cultures; only gradually is a supranationally accepted corpus of research data and theories evolving;

- the range of paradigms and methodological approaches of educational research is becoming wider and more diverse. The growth of action research, case studies and policy analysis indicates an upgrading of qualitative methods.

Tentative synopsis

The deliberations of this seminar can draw on the three comprehensive and authoritative country reports and on the expertise of a multinational array of educational researchers and

policy-makers. Consequently, this exposé will be confined to a tentative synopsis of selected issues and problems.

The statu quo

Since the boom period of the 1960s and early 1970s and the so-called "trend reversal" (*Tendenzwende*) during which educational policy and educational research lost their public policy priority status, the Austrian, Swiss and German educational research systems have been going through a period of "consolidation". The noble aspiration to base policy decisions on research findings has given way to more sober views of the complex interaction between politics/policy formation/research implementation and practice. The alienation between policy and research seems to have been stronger in Germany than in Austria and in Switzerland, but in all three countries educational research was spared massive cuts and the accusation of being part of a politicised "educational establishment" as was the case in other countries. Perhaps the most spectacular singular sign of lack of political esteem was the (meanwhile abandoned) intention of the Austrian Ministry of Research and Science to close the education faculty of the University of Klagenfurt which had been founded in 1970 as a national "pace-setter" for educational R&D (BMWF, 1992). Are there, as the renewed interest in the developmental aspect of educational R&D suggests, indications of a "second realistic turn" in which research moves closer to the practice field of the policy/research/practice "triangle"?

Institutional frameworks

The process of expansion and diversification which greatly enhanced the capacity of educational research in all three countries shows a similar pattern:

- the Europe-wide *explosion scolaire* and the subsequent founding of new universities with education departments comprising several specialised professorships instead of the traditional singular "chair";
- the upgrading of teacher training institutions from extended secondary education to tertiary/higher education;
- the foundation of large, publicly funded but non-governmental supraregional research institutions capable of conducting large-scale studies and commissioned research projects of several years' duration, thereby providing data on the functioning of the educational system as a whole;
- the establishment of research institutes under the control of educational administration, whose main functions are the "accompanying evaluation" of pilot projects and school development (*Begleitforschung*) and curriculum development.

There are, however, a number of significant national variations. While in Germany each of the three research sectors (universities, publicly funded non-governmental research

institutes and administratively controlled institutes) has an impressive potential which reflects the size of the Federal Republic, the much smaller Swiss and Austrian systems have correspondingly smaller university departments and teacher training institutions which are not deemed "higher education" and do not have an explicit research mission; and in both countries only a few supraregional or quasi-national research establishments exist.

Is it appropriate to speak of a German or Swiss or Austrian "system" of educational research, especially in the face of German federalism and Swiss regionalism? Can the three sectors be seen as complementary or do they have to compete for resources, project commissions and public recognition? What measures are taken (or indeed can be taken) to strengthen co-ordination, to safeguard coherence and avoid reduplication?

"Functions" of educational research

The Swiss plan for the development of educational research lists a number of functions of educational research (SGBF, 1988):

- the analytical-explanatory function (comprehensive interdisciplinary exploration of the field of education);
- the theory-building "synthesising" function;
- the prospective function (creation of models for the future);
- the evaluative function (monitoring and evaluation of educational innovations);
- the planning and development function.

Do the three sectors of educational research have different self-concepts ("corporate identities") with discernible propensities to certain approaches (e.g. is the university sector "more critical")?

The policy/research/action "triangle"

What is the perceived "distance" between policy, research and practice? Depending on the kind of problem investigated, research can be "close" to administration and policy and seen as an instrument providing a scientific base for policy-makers. It can on the other hand be "close" to practice, a partner in problem-solving at the grass-roots level. In the German-speaking countries the track record of educational research as a partner of practitioners is not strong and the development side of R&D is traditionally weak.

If there is any truth in the "three cultures" theory, and if the unsatisfactory impact of research at the macro-political level has caused a certain estrangement between academic research and policy making since the mid-1970s, what can be done to bring about a rapprochement between policy-makers, researchers and practitioners?

Changing research themes

Two of the side-effects of the retreat of educational research from politically controversial issues are the thematic imbalance and patchiness of the research "landscape". "Access and equity" studies have become rare, and the monitoring of the overall function of the three education systems is hampered by a shortage of representative surveys and longitudinal studies. Switzerland and Austria have similar deficiencies in the areas of educational sociology, the economics of education and higher education research; but both countries share with Germany a growing interest in institutional development, "autonomy" and "quality".

While giving full and due credit to individual Swiss and Austrian researchers and institutions, there can be little doubt about the greater potential of the large and diversified German educational research system. Some German university departments of education, non-governmental institutes and *Länder* institutes are particularly receptive to identifying emerging problems, setting the research agenda and adopting R&D strategies in areas where foreign (American, British, Scandinavian) educational research is more advanced. In Austria there is often a considerable time-lag before issues are taken up via Germany. Switzerland, however, seems to benefit from the "cross-fertilisation" of different research cultures through the "traditional openness" of educational research in Suisse romande (SGBF, 1988).

Two final questions:

- To what extent do German, Swiss and Austrian education institutes learn from each other's R&D findings and experiences?

- What are the likely reactions to the relative strengths and weaknesses identified by the three national reviews and by their confrontation with the wider OECD educational research context?

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CHAPTER 4. EDUCATIONAL RESEARCH IN AUSTRIA[1]

by
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Austria has a long tradition of pedagogical thinking, but up to the 1960s this field of study was mainly influenced by philosophy and the humanities. It was in the mid-1960s that the discipline passed through a substantial modernisation: a shift to an empirical direction took place, and connections with psychology and the social sciences were strengthened. These new developments in educational research are the subject of this chapter. Three major fields of research are covered: school education, higher education, and vocational education.

Resources for educational R&D

Tables 1 and 2 offer information about the level of expenditures on educational R&D and the number of persons occupied with the educational research sector in Austria in 1989.

Institutional frameworks

The division of responsibilities between the federal level and the *Länder* (states) is rather complex. Simplifying, one can say that compulsory education is the responsibility of the *Länder*, whereas post-compulsory education (including higher education) is a federal-level responsibility. The federal government has the power to pass fundamental laws concerning the whole education system.

There is one national institute for research in school education, called the *Zentrum für Schulversuche und Schulentwicklung* (ZSE). When it was founded in 1971 it had the task of evaluating the reform models for comprehensive schools (*Schulversuche*). This reform

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[1] This chapter is a summary of the official country report, "Bildungsforschung in Österreich: Österreichischer Länderbericht zum 3. Internationalen OECD -- Seminar zur Bildungsforschung und entwicklung". An updated version of this chapter is published in OECD (1995), *Educational Research and Development: Trends, Issues and Challenges*, Paris.

failed for political reasons, and subsequently -- during the 1980s -- the ZSE focused on curricular matters. Today the main preoccupation of the ZSE is local school development.

Table 1. **Expenditures on educational R&D in 1989 (Sch 1 000)**

R&D Sector	Funded by			
	Public Sector		Private Sector	Total
	Federal	Total		
Higher education	107 773	109 904	904	110 844
Government[1]	23 424	32 038	339	32 377
Total	**131 197**	141 978	1 243	**143 221**

1. Including private non-profit sector.
Source: ÖSTAT, Austria.

Table 2. **Persons occupied with educational R&D in 1989**

R&D Sector	Number of R&D Units	Number of Researchers		FTE[1]	
		R[2]	Total[3]	R	Total
Higher education	18	242	331	87.4	112
Government[3]	11	51	91	26.4	48.2
Total	**29**	**293**	**422**	**113.8**	**160.2**

1. FTE = full-time equivalent staff.
2. R = research personnel.
3. Including private non-profit sector.
Source: ÖSTAT, Austria.

Six out of twelve Austrian universities have institutes for educational research. The University of Klagenfurt is of particular interest because, when it was founded in 1970, the focal point of the whole university was on educational research. It was mainly the federal administration which favoured the idea that this university might become a centre for educational research and development and also a consulting agency for the government. However, with the decrease of interest in educational issues during the 1970s and early 1980s,

the focus of this university has shifted to other fields of study, although it still has the largest number of personnel devoted to educational research of all the Austrian universities.

R&D in the field of vocational education is dominated by contractual research. Since the early 1970s a structure of institutions has emerged in this field which is mainly market driven, the demand being expressed by federal ministries (especially the Ministry of Labour) or institutions of the social partners, and the supply being served by private sector initiatives which are publicly subsidised to a more or less extent. At the supply side three groups of institutions can be identified. First, there are four institutions which focus in this field and on which the major share of both work and funds are concentrated: IBW, ÖIBF, IBE, IWS-ARMA. Second, there are about ten research units which do at least more than one project during a two-year period. And third, some 40-50 institutions and individual researchers are registered for performing single projects.

Research themes

The main impetus to the emergence of educational research as an empirical discipline with close connections to the social sciences came from the expansion of post-compulsory education and from the reform policy of those days. On the one hand the growth of student numbers gave rise to higher levels of administrative complexity and posed new challenges to the administration of schools and universities. At the same time, politicians and administrators made deliberate efforts to reshape the curriculum, to increase access to students from disadvantaged backgrounds, and to democratise institutions of education.

School education

In the 1960s there was broad agreement that Austria needed to increase the educational qualifications of its workforce. Research at that time focused on the issue of access to post-compulsory education. At that time, policy-makers and researchers were also rather optimistic about the feasibility of forecasting manpower demand. The first substantial contributions to those issues were not made by universities but by a research group of the ministry (for example, the first Austrian report to the OECD in 1968) and by the teacher training institutes. The latter mainly have teaching functions but they have also a distinct tradition of empirical research (*pädagogische Tatsachenforschung*).

The 1970s were dominated by the very controversial issues of comprehensive schooling. The ZSE was explicitly founded for the purpose of evaluating whether students from comprehensive model schools perform as well as students from the traditional system. At that time, the situation at the universities had already changed and there was significant potential for empirical research at most institutes for research in education. Several university researchers contributed to the evaluation of the model schools (*Schulversuche*), but there was also much controversy and criticism concerning those reform models, coming not least from within the universities.

In the late 1970s and the 1980s the reform-oriented climate of the previous decade gave way to a more pessimistic mood. The reform of the secondary school envisaged in the 1960s failed. Policy-makers ignored the research on comprehensive schooling. The reform models have not been implemented. Rather, the selection of students at the age of ten has been perpetuated and only slightly modified. This was accompanied by a shift in the research agenda. Instead of trying to achieve equality of opportunity, many researchers worked on studies trying to explain why it is impossible to achieve it. Some researchers shifted their attention from the disadvantaged to the most gifted students.

A new reform spirit in education emerged in the 1990s. The slogan in both research and policy making is now school autonomy. Instead of seeking comprehensive solutions, the focus is on local -- that is, school-level -- initiatives. Recent research issues include multiculturalism and the integration of disabled students into the "mainstream" educational community.

Higher education

Starting in the 1960s, the federal government made attempts to make the higher education system more responsive to societal demands. For this reason the Austrian Federal Ministry for Science and Research (BMWF) has made contractual research opportunities available to university and extra-university researchers. Until now, such contracts have been the most important source of research into higher education in Austria, with as many as 800 projects commissioned by the BMWF.

The projects have addressed a variety of questions and have employed different disciplinary orientations and research methods. Four main groups can be distinguished:

- Some projects have merely aimed to reduce the administrative burden associated with higher education.

- Some have aimed at exploring specific public policy options, for example the investigation of the legal implications for education of Austria's entry into the European Union.

- Still others have constituted more broadly based, strategic research.

- Finally, some projects have been undertaken where the administration has simply subsidised more general education research.

Issues covered in these four areas include:

- drop/out rates and the causes of the typically long duration of higher education study in Austria;

- access to the university system;

- the "democratising" of the system both internally and externally;

- curricular reform;
- student support issues;
- the graduate labour market;
- more recently, questions of internal institutional management which have come to the fore.

Until now, the main contribution to higher education research conducted within the university system has been initiated and carried out by individual researchers. Three institutes in particular have focused on higher education research but, in general, universities have not recognised a strategic interest in undertaking institutional research.

In the absence of university-based facilities for educational development for the higher education sector, a national-level private association (*Österreichische Gesellschaft für Hochschuldidaktik*) has been developed by individual researchers and students with a special interest in this area. This association caters to staff development needs and publishes the only Austrian journal of higher education research.

Vocational education

Research into vocational education is a separate field in Austrian educational R&D. Its distinctiveness results not only from the specific field concerning special topics but also from a particular institutional framework constituted by both researchers and "customers". Research in vocational education is connected to both the apprenticeship system and that of monitoring labour market development and transmission of information about occupational categories. The term development refers on the one hand to routine activities of compilation and updating information about occupational categories, and on the other hand there are innovative activities using media such as EDP programmes, films, etc. for the information system. An important issue is the development of a tight monitoring system of labour markets which, however, has not been closely connected to education and training topics up to now. R&D into vocational education became a more important topic during the early and mid-1970s, its intensity increased somewhat until the mid-1980s, and has remained stable since then.

Different sources of analysis give varying accounts of the most important research themes, such as:

- monitoring of labour market developments;
- apprenticeship training;
- information about occupations;
- further education and training;

- international issues;
- efficiency and reform of education and training;
- vocational issues in higher education;
- target groups for labour market intervention;
- regional aspects.

Research methods are concentrated on surveys, reports about samples are frequently not very satisfactory, and R&D is performed mainly in a routine manner, with only few projects trying to use more sophisticated research methods.

Output of R&D into vocational education may be estimated at about 100 research projects commissioned annually. Since 1990, about 80 publications from 20 researchers in the field have been included in the Social Science Citation Index, which is the most important data bank in the field of social sciences. This amounts to about 25 references a year, or about one or two references per researcher and year.

Problems and challenges

Public policy in the area of educational research still reflects the situation of polarisation which, in other spheres of political life, has largely disappeared. As a result, the notion of a purely professional, expert viewpoint on educational matters is not considered tenable. Statements by education experts tend to be attributed *a priori* to a particular political position and consequently devalued.

In general, the field of education policy remains somewhat provincial -- that is, not well informed by international experience. Comparative research in education is both poorly developed and undervalued in Austria.

There is a situation of extremely imperfect competition among higher education researchers. Owing to the fact that there are no proper arrangements for the management of third-party funding, many researchers tender for contractual research from a position of important financial advantage.

There is a considerable degree of mutual misunderstanding between the government sector which commissions research and those who carry it out. On the one hand, the government sector often fails to appreciate the depth of expertise and, particularly, the continuity needed for proper research in higher education. On the other hand, researchers themselves sometimes neglect the practical exigencies associated with the needs of governments to make real decisions.

One major problem in the field of vocational education is related to the organisational framework. The labour-related institutions support a proposal to found a federal institute for R&D, which would be more or less a combination of the two largest institutes (ÖIBF, IBW).

This plan, however, is not supported by employer organisations. A somewhat modified proposal was brought forward to group other institutions and researchers into a network which should be funded by federal money. An alternative plan wanted to establish a research council which would be headed by a distinguished member of the scientific community and which would commission research projects on a peer review basis.

CHAPTER 5. EDUCATIONAL RESEARCH IN THE FEDERAL REPUBLIC OF GERMANY[1]

by
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Definition and objectives of educational research

Educational research contributes as basic research to an improved understanding of education processes and systems (the development of theory and method), and as applied research to the scientifically controlled further development of education (provision of diagnostic and prognostic information). As developmental research, it is devoted to the investigation and construction of products important for the education process (tests, curricula, school models), and as practical research to the realisation of the results of research in educational practice in relation to the effectiveness of the strategies that are put into effect (diagnostics, didactics, evaluation research, support research on test procedures).

The research deals with the institutional areas of kindergarten, school, vocational education, university and college, adult education and their related areas of specialist didactics, and also with the interinstitutional fields of general and historical education, comparative education, social education, educational sociology, educational economics, and educational diagnostics and counselling. As education processes are influenced by various individual and social conditions, educational research includes alongside its primary discipline (pedagogics or educational science) other disciplines such as psychology, sociology, economic science, jurisprudence and the science of history.

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[1] This chapter is a summary of the official country report of the Federal Ministry of Education and Science, *Stand und Perspecktiven der Bildungsforschung -- Länderbericht für die Bundesrepublik Deutschland*, Frankfurt am Main, Bonn, May 1994. An updated version of this chapter is published in OECD (1995), *Educational Research and Development: Trends, Issues and Challenges*, Paris.

[2] Advised by Professors Achtenhagen of Göttingen; Baumert of Kiel; Manning of Berlin; Mitter of Frankfurt-am-Main; Roeder of Berlin; Schiersmann of Heidelberg; Schmitz of Mainz; Teichler of Kassel; Weishaupt of Erfurt; and Wilhelmi of Bonn.

Institutional and functional differentiation in educational research

Corresponding to the varying levels of legislative and administrative competence of the federal government and the federal states (*Länder*) in educational and scientific politics, the *institutions of educational research* have developed differences in their fields of work, institutional forms and their functions in science, practical spheres and politics. The need for basic knowledge of developments in education on the one hand and, on the other, for research oriented towards the planning, practice and development of education operating as an instrument in the guidance of education policies and practice, gave rise to a number of different types of institution:

- university educational science institutions which are active in research and teaching, in certain cases primarily in research;
- scientific institutions for educational research not located at universities, and scientific service institutions;
- utility-oriented institutions of educational research outside universities, such as R&D institutions subordinate to the administration or affiliated to associations.

Educational research in the context of educational science at universities

Educational research organised in the form of projects and empirical in orientation is carried out mainly in universities. The subjects of more than three-quarters of the university educational science research projects documented in the Research Information System Social Sciences are concerned with educational research. The most important discipline in quantity is university educational science. It accounts altogether for 40 per cent of the projects. In relation to the total educational research resources of universities, this even amounts to between 50 and 60 per cent.

At the beginning of the 1960s the level of institutional organisation of educational science at universities was fairly low. There was frequently only one professorship, covering philosophy and pedagogics. By the beginning of the 1990s, educational science was, apart from some specialised universities, represented at all universities -- at 66 universities in West Germany and at 13 in East Germany.

Educational research institutions outside universities

To the *educational research institutions outside universities* financed mainly by regular budgets belong the *independent research institutions* of supraregional importance, with scientific interests affecting the whole country, and the *institutions having servicing functions for research*. The *utility-oriented institutions undertaking educational research* include the R&D institutions oriented towards planning and practice, which carry out research as an instrument in the guidance of educational policies and practice. In this manner, like the service institutions themselves, they have servicing functions -- less, however, in support of research than for utilisation by the federal and state administrations and by associations.

Prior to 1963 there were only nine institutions of educational research in existence outside universities. In the 1960s the scientific institutions of educational research expanded, and in the 1970s the utility-oriented institutions of the federal government and federal states. Since 1986 there have been 28 educational research institutions outside universities in the former Federal Republic, three of these institutes now having external branches in East Germany. In addition, two of the East German federal state institutions also carry out assignments in educational research.

Infrastructure of educational research

According to an inquiry conducted by the Max-Planck Institute for Educational Research in 1988, full-time professors arrived at a relatively favourable assessment of the total material provision. Where they found considerable deficiencies was in the supply of operating funds for carrying out and evaluating surveys. The provision of personnel and equipment at institutions for educational research outside universities is quite favourable. These institutions all have at their disposal libraries of their own and extensive electronic data-processing equipment which they also use for information and documentation. In 1992 the federal government and federal states began a pilot study under the title "Specialist Information System for Education". Its aim is the development and testing of a joint co-ordination centre designed to integrate and make available all the documentation services and sources of information and literature on education held by government and federal state institutions, universities, churches, associations and publishing houses.

Responsibility of the federal government and federal states for policies in education and science

With the exception of certain specialist ministerial responsibilities, the Federal Ministry of Education and Science exercises the competence of the federal government in matters of policy relating to education and science. It looks after the following areas in particular: the promotion of education, non-school vocational education, legislation and planning in higher education, and educational planning together with the federal states.

The ministry makes use of educational research in fulfilling its departmental responsibilities. In addition, it draws on the research capacities of a number of educational research institutions which are supported as institutions in themselves or on a contractual basis. The jurisdiction of the ministry also covers the Federal Institute of Vocational Education in Berlin and Bonn.

At the level of the federal states, responsibility for *school policies* lies exclusively with the Ministries of Education and Cultural Affairs. Regarding policies in the field of science, they share this responsibility with the federal government. The federal states support educational research at universities via the *basic financial provision for universities.* In addition, federal state funds provide support for institutions financed together with the federal government, for federal state institutions, for the general promotion of research (the federal

state share in the self-governing scientific organisations) and for the promotion of pilot studies in the field of education.

Personnel resources in educational science at universities

At the beginning of the 1990s, educational science at universities, from the point of view of the provision of personnel, represented the most important part of educational research conducted at institutions. In 1987, there were 2 120 full-time scientific staff altogether in education science. In terms of the number of professors, *educational science at universities* may be regarded as one of the *major subjects*, compared with neighbouring fields in the humanities and social sciences. Compared with the number of professors, however, the numbers of *junior academic staff* in pedagogics is decidedly *small*. The ratio altogether of professors to junior scientific staff was about 1:1 in 1987. In the humanities and social sciences, the corresponding ratio lay between 1:2 and 1:3. The process of supplying staff to East German universities is at the present time still continuing. The number of scientific personnel in educational science in East German universities was estimated at about 700 in 1994.

Personnel resources in educational R&D outside universities

According to a survey carried out in 1990 by the German Institute for International Educational Research, the staff working in R&D at non-university educational research institutions in 1990 numbered altogether 937 permanent full-time positions for scientific personnel. Since only a few external branches of West German educational research institutions have been established in the new federal states, the personnel resources for R&D in educational research outside universities in Germany as a whole after unification is hardly likely to have exceeded 1 000 full-time positions for 1994.

Personnel resources in education research outside universities can be allocated to research to a greater extent than can those for scientific staff in university educational science, since their research capacities are restricted above all by their teaching responsibilities. On account of assignments which they have to carry out for ministries or associations, the R&D sector of service institutions and of those subordinate to the administration or affiliated to associations is estimated to take up on average a maximum of 20 per cent of their activity. The R&D potential of non-university institutions thus amounts to roughly 450-500 full-time positions. The ratio of R&D capacity in terms of full-time positions as between university and non-university educational research is about 1:1.

Research fields

Empirical education research in the context of educational science is in the first instance *school-oriented research*, which moreover concentrates on the general school system. Project research in the remaining institution-related fields remained relatively stable between 1978 and 1989, with a share of some 10 per cent each. Among the interinstitutional fields within

educational science, social education, educational sociology and educational economics are represented with about 10 per cent, and educational diagnostics and counselling with about 18 per cent of the projects. Under 5 per cent of the projects have taken up the fields of general and historical education, comparative education and media pedagogics. There are differences in thematic emphasis between the universities and non-university educational research institutions. At *universities* there is a disproportionate concentration on *theoretical and historical* questions. Projects concerned with *structural aspects of education* are dealt with mainly *outside universities*. Projects dealing with vocational education and adult education are also rarely covered in the university. In *research into vocational education*, which plays a minor role at universities, the *state institutions* predominate.

Research methods

Information on the methodological basis of empirical educational research is available from the Research Information System Social Sciences. Three-quarters of the registered research projects consist of one-point surveys, usually with very small samples. Cross-sectional studies, which allow deductions to be made concerning defined populations, along with longitudinal studies play a subordinate role with under 10 per cent of the projects. Secondary analyses, with about 10 per cent of the projects, have at least established themselves in educational research. Two-thirds of the projects may be defined as descriptive analytical studies of varying forms. Experimental or causal analytical procedures, on the other hand, are only of secondary importance. Exploratory and case studies, taking up less than 10 per cent of the projects, are also little represented. Among the procedures used to collect data, questionnaire methods dominate with some 70 per cent of the total. Compared with the situation prevailing during the 1970s and early 1980s, observational approaches and tests are little used now. The lack of longitudinal studies shows clearly that much still needs to be done to expand the study of the various educational and developmental processes.

Establishing priorities in educational research

Within the framework of educational science in universities, professors can make their own decisions regarding the objectives of their research and the realisation of research plans. Scientific institutions in educational research are also independent in the planning of their research. Like the universities, they are subject to evaluation which is internal to the specialist field and is carried out by self-governing organisations such as the German Research Foundation, the Scientific Council, and scientific advisory boards of the Max-Planck institutes. The objectives of the federal and state governmental institutions are oriented towards the specialist competence of the respective ministries and the requirements of educational practice and policy.

Policy objectives in educational research

Federal and state governments determine the objectives and topics of educational research within the area of their responsibility in education and science. Together they decide

on the volume of resources in support of general research and establish educational research priorities for departmental research and for pilot-study programmes. In addition to this they decide on the joint funding of non-university organisations for educational research. The Federal Ministry of Education and Science sets out its current objectives in the context of departmental research in a performance plan. The plan for 1993/94, for example, listed the following items:

- new federal states;
- international co-operation;
- equivalence of general and vocational education;
- cultural education;
- company qualification and staff development policies;
- encouragement of the specially gifted;
- environmental education;
- health education;
- violence and extremism;
- correspondence courses.

In the Government/Federal State Commission for Educational Planning and Promotion of Research, the priorities are established for the educational pilot-study programme. Pilot studies assist in making decisions on the further development of education. The fields to be supported include at present:

- vocational education;
- higher education;
- new information and communication technology in education;
- environmental education;
- education in the arts and culture;
- girls and women in education;
- differentiated support for special groups.

School research

School and tuition research investigates primarily the teaching/learning processes and their determinants. An analysis is made of the significance of relevant factors for school performance and success: cognitive personality characteristics (intelligence, previous knowledge related to specific subjects), affective personality characteristics (examination anxiety, self-image with respect to ability, school involvement), motivational factors (achievement motivation, attentiveness), sex, ecological and school organisational characteristics (competence of the teacher, type of school), school class context (composition and climate of the class), interaction between school and external influences from family, and the individual incentives and structure of the learner. Research into school teachers is undertaken increasingly from the biographical perspective, being concerned most of all with questions of their professional development.

Alongside teaching/learning research with its microanalytical orientation, the analysis of the structure and development of general and vocational school education and its wider conditioning framework is of importance. Guided by educational reform concepts, questions relating to equality of educational opportunity and the efficiency and quality of school education belong to the continuing concerns of school research. The influence of individual and social circumstances on access to learning, length, completion, repeating and discontinuing of schooling are looked into, as well as pupils' interest in particular areas of education.

Vocational education research

Since the 1980s, questions of the acquisition of vocational qualifications have been at the centre of research into vocational education. In the wider perspective, interest in investigation moved away from the provision of qualifications (research into the product) to self-directed qualification processes (research into processes). This produced two priorities for conducting research:

- *vocationally relevant educational processes* in the context of changes in technological, economic and social demands and conditions;
- *the examination of learning and work processes* as developmental processes, considered from the point of view of individuals and in the context of the objective conditions in the work and learning situation.

These priorities, following on proposals of the Senate Commission for Vocational Education Research of the German Research Foundation, are to be treated as research assignments of exceptional importance and are set out in 14 question complexes which include: the aims structure of vocational education processes, the identification and didactic integration of elements within the vocational learning process, educational consequences of the changing structure of trades and professions and the heterogeneous clientele seeking vocational education, and learning-within-work processes and its links with pedagogically organised learning.

Higher education research

Higher education research concentrated at first on the research field of the university and professions. Following on the pattern of macrosocial planning in higher education with its model calculations on the demand for university graduates and their availability, attention was turned to vocational fields and professional careers and, more recently, to the integration of university graduates into their professions. The standard tasks of higher education research now include regular investigations of the social position of students, questions of the self-direction of qualification processes, and the importance of the social milieu at and outside universities. Since the mid-1980s, higher education research has also looked into the structure and organisation of higher education: diversification, management, evaluation and internationalisation.

Adult and further education research

Significant areas of research into adult and further education include: participants and beneficiaries, adult autodidactic learning and the media supporting this, and lifelong learning. Research into institutions investigates the organisation and administration of adult and further education institutions and their relationship to their sponsors and to society, and work experience has shown that the following areas would also benefit from research: professional career paths, self- and perceived image of adult instructors, as well as institutional analyses and studies of professions.

Overlapping subjects of educational research

Questions concerning the interinstitutional subdisciplines of educational research are of significance for all areas and levels of education. The relative importance of the education process and the structural development of individual areas of education can only be adequately judged if the preceding and subsequent levels of education are taken into account and investigated in the context of social developments. The sociology of education, with its questions on social structures and socialisation theory concerning, for instance, the choice of individual paths in education or the sociocultural conditions affecting a person's self-assertiveness, can contribute to the integration of individual results that are achieved in the various part-disciplines. Socio-pedagogical research into youth and the family complements the investigation of the education process with the inquiry into living conditions, and community and group relationships of children and young people outside school and the family. Research in the fields of the economics of education and educational law asks questions about management problems in education from an economic and institutional law point of view. Finally, international comparative educational research has the task of establishing structural differences in education systems and processes and in the development of the student, through international and intercultural comparisons. Violence in schools and intercultural learning are research subjects of immediate interest to education at the present time.

Professional development in the field of educational research

The specifically scientific orientation of educational research institutions reflects their functional difference from that of universities as they respend to the varying demands of politics, everyday pedagogical practice and the needs of research. Nevertheless, an attempt to integrate the various resources of knowledge needs to be made, to enable a regular exchange of opinion on the theoretical and methodological developments and deficits in educational research and policy-making and on the practical needs of education. The insufficient provision of posts linked with qualification opportunities in educational science compared with the social science disciplines, and the corresponding low level of support for junior scientific staff, sets limits on the development of the profession. Because of the segmented nature of the discipline and the inadequate co-ordination of research work at universities, projects designed to achieve higher qualifications tend to be only individual studies. The process of establishing priorities at universities and of increasing co-operation between the various institutions of educational research ought therefore to include the active support of junior scientific staff in order to guarantee the long-term development of the personnel resources of the profession.

New tasks and research priorities for educational research

It is important that the overall conditions affecting education should always be considered within the context of social change, so as to ensure or improve the functional capacity and quality of education and the educational and developmental processes taking place therein. The circumstances, patterns of development and end results of the education process need to be reviewed in relation to their role within the individual specialist fields of educational research. The research results and the deficits revealed by such investigations need to be set in relation to one another, in order to establish the level of achievement in the various fields of specialised research and their usefulness for the formulation of specific and interdepartmental questions relating to the development of education. The definition of the problems, priorities and future prospects for research needs to be undertaken within the framework of science and with reference to specific specialist fields.

Planning R&D in educational research

In co-ordinating the planning of R&D, account must be taken of the institutional and legal conditions relevant to educational research. At universities and at educational research institutions outside universities, the self-governing scientific organisations are responsible for directing research in the field of education. The planning of R&D at utility-oriented institutions is determined by practical and policy requirements in education. Nevertheless, it ought to be possible to achieve co-ordination of the supportive measures undertaken by the federal government, federal states and the self-governing scientific organisations to the extent that they strengthen the reciprocal exchange of information and regular discussion of research results and deficits within the scientific community, while also incorporating the viewpoints of those concerned with educational policies and practice. The exchange of information in educational research could be institutionalised in the form of consultative committees or

networks, and by regularly setting out a balance of the present position and future prospects of educational research. For this purpose, publications, reviews, academic seminars and conferences could be used as public discussion forums, in parallel to an efficient system of specialist information serving as an infrastructure for educational research.

CHAPTER 6. EDUCATIONAL RESEARCH IN SWITZERLAND[1]

by
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Although educational research has been carried out in Geneva since the late 19th century, the real beginning and the establishment of educational research throughout Switzerland dates from the 1965-1975 period. In subsequent years, researchers have continuously worked to build a relationship of trust with educational policy-makers and practitioners. Their aim has been to establish a climate of confidence among the different stakeholders in the field, so that it can grow and develop.

The condition, problems and prospects of Swiss educational research have been addressed in a number of recent studies conducted by the Swiss Educational Research Association, the Swiss Science Council and the Swiss National Scientific Research Fund. Among the major problems revealed by these studies are the following:

- In the Swiss multilevel system of educational organisation a distinction has to be made between fundamental research determined on the basis of purely scientific criteria, and applied research and experimental development at the cantonal, regional and national level. The distribution of educational R&D among these three levels and the role it plays at each level have only been partially defined and should be clarified.

- Owing to the structure of the Swiss educational system, educational R&D takes mainly place in a large number of decentralised institutions. As a consequence, most of these institutions are small and do not reach the critical mass; educational R&D therefore is fragmented to a large extent. Solutions to this problem are to be looked for in more co-ordination, co-operation and networking on the one hand, and more thematical and institutional specialisation on the other.

- Whereas certain fields are well covered (mainly educational psychology and didactical studies at the micro-level of compulsory schooling), there are serious deficiencies in others. As regards the levels of education, research into upper-secondary, tertiary and post-tertiary education is insufficient. Educational sociology and the economics of

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[1] This chapter is a summary of the official country report, *Bildungsforschung in der Schweiz: Schweizerischer Länderbericht zum 3. Internationalen OCDE-Seminar zur Bildungsforschung und entwicklung.*

education are also underrepresented. Third, the study of macro-level issues in the relationship between education and the society is beset with deficiencies.

- Finally, there is a mismatch between policy priorities defined at the national level and research priorities determined primarily by the needs of single cantons.

Institutional frameworks

The structure of educational research is in keeping with the federal and decentralised structure of the Swiss educational system and the country's small size. Thus, unlike many countries, Switzerland does not have a national educational research institute, and its R&D institutions are located at the cantonal or regional level. The 1989 directory of institutions listed 76 institutions, comprising five which were relatively large, 13 of medium size, and a large number which were either small or very small. These institutions can be broken down into the following types:

- university institutions (39);
- institutions within administrations;
  - at cantonal level (21)
  - at regional level (2)
  - at national level (6)
- private and semi-private institutions (8).

Research output is approximately the same for university institutions and institutions within the administration, although according to the most recent trend the latter's share is growing.

The prevalence of small institutions can be viewed and interpreted in different ways, either negatively, as a sign of fragmentation, or positively -- and this is true of cantonal institutions in particular -- as a means of ensuring close links between research, policy and administration. However, this raises another problem, i.e. the fact that these small institutions have yet to reach a certain "critical mass". Co-ordination and co-operation are the only solutions to this dilemma.

If the development of educational research in the French-speaking regions is compared with that of the German-speaking regions of Switzerland, then the French-speaking region is clearly ahead, for example in terms of the number and size of institutions.

The Swiss Educational Research Association (SSRE), founded in 1975, and the Swiss Association for Applied Research in Vocational Training (SRFP), founded in 1987, play an important role in supporting, promoting and organising educational research and in reinforcing its identity. Concrete proposals for further institutional development are currently

under discussion. They focus on reinforcing and if necessary creating new research training centres and networks, as well as finding ways of solving the problem of the critical mass of small institutions. Two proposals have been advanced to date: the first would comprise three centres (including a bilingual one which would cut across the linguistic border), while the second would have only two centres (a French-speaking and a German-speaking one, which would consequently not cross the linguistic border). In both models, the centres would act as administrative hubs for the networks of co-operation between university and non-university institutions. This strategy aims at improving co-ordination and co-operation among three types of institution:

- university institutions, especially in German-speaking Switzerland;
- institutions within the administration;
- university institutions and those within the administration, especially in German-speaking Switzerland.

A major reform aimed at creating specialised *hautes écoles* in the post-secondary non-university sector is currently under way. Teacher training is to be included in the *hautes écoles pédagogiques* or HEPs (higher teacher training schools), which will have to perform important functions in R&D. Hence a a new type of institution will enrich educational R&D.

Resources for educational research

The cantons are by far the largest source of funding for educational research (47 per cent of the total). The confederate government adds another 44 per cent, primarily through the Swiss National Scientific Research Fund. The municipalities or communes (3 per cent) and the private sector (about 6 per cent) play only marginal roles.

Annual spending on educational research (excluding capital expenditures) amounted to SF 5.6 million in 1980 and SF 7 million in 1990. This represents approximately 0.06 per cent of total public expenditure on education and research, and is far below the target set by the Swiss Science Council in 1973 (1.5 to 2 per cent). By the mid-1990s, average annual spending on educational research will have temporarily increased by approximately SF 3 million, thanks to the National Research Programme devoted to "The Effectiveness of our Educational Systems".

A distinction has to be made between a core group engaged in long-term, continuous educational research (100-200 researchers) and a less clear-cut group whose work in this field tends to be temporary or intermittent. In 1990, there were in all some 120 full-time equivalent research positions.

Research themes and methods

By far the largest share of all research studies is devoted to primary and lower secondary schooling (each accounting for about 20 per cent of the total). Given that the major reforms

currently under way affect the upper- and post-secondary levels, one is struck by a mismatch between policy priorities defined at the national level and research priorities determined primarily by the needs of single cantons. If projects are classified by domains, then it emerges that there is an increasing amount of research on teaching and learning methods, and a decrease in research on the social, economic, political and legal aspects of the educational system.

Priorities for research

Four major national research programmes (PNR) have been carried out over the last 15 years. These programmes give a clear indication of the priorities:

- problems of social integration in Switzerland (PNR 3);
- education and working life (vocational education and continuing vocational training) (PNR 8);
- effectiveness of educational systems in the face of demographic and technological change, and problems posed by multilingualism (PNR 33);
- examination of the condition of primary schooling (SIPRI) (a large-scale R&D project carried out by the Swiss Conference of Cantonal Directors of Public Instruction).

Problems and challenges

The analysis of Swiss educational research revealed several deficiencies in the scope and orientation of R&D. There is a lack of research on upper- and post-secondary education, including research on vocational training, university and non-university institutions, and adult education and continuing vocational training. There is also a dearth of studies in the sociology and economics of education. Further, basic research is in a weak position compared with applied research.

Swiss educational research appears to be open to a variety of approaches. The empirical methods of the social sciences are used together with the interpretive methods of the human sciences, although the former are predominant. The most frequently used techniques are questionnaires, interviews and tests.

The first challenge faced by Swiss educational research is to integrate its elements into a co-ordinated system and to reinforce the links between this system and educational policy, administration, and practice. The two basic elements of this system are fundamental research and applied R&D at the cantonal, regional and national level.

Several initiatives have been taken to improve co-ordination. Two regional institutions complete the cantonal structure for school development and educational research (IRDP in French-speaking Switzerland and ZBS in central Switzerland), and co-ordinating bodies -- the

Swiss Conference for the Co-ordination of Educational Research (CORECHED) and the Swiss Conference of Directors of Educational Development and Research Centres (CODICRE) -- have been established. The mandate of the first body, created in 1991, is to improve co-operation between educational policy and research. Its membership comprises all the major stakeholders in educational R&D.

The challenges in the Swiss context can be summed up by the following questions: Does Switzerland need a national educational research policy? Is a national educational research policy possible in a federal and decentralised nation? It is difficult to answer these questions in a country that does not have a body responsible for defining national educational goals and priorities. From the standpoint of research, however, it is precisely a federal and decentralised country that needs a national educational research policy. The various policy actors have yet to reach a consensus on the need for such a national policy.

The ultimate objective is to establish a co-ordinated educational research system in which basic research is reinforced and where there is a clear articulation of applied R&D at the cantonal, regional and national level. Applied research would then become an accepted and normal part of educational policy and administration. In light of this overall objective, future efforts to develop Swiss educational research should be focused on the following six areas:

- laying the foundations for a national educational research policy;
- creating research-training centres and networks;
- reinforcing the links between applied research and educational practitioners;
- eliminating the most serious imbalances in the themes addressed by educational researchers;
- improving the basic and further training of educational researchers;
- strengthening international co-operation and specialisation in the fields of basic research and applied R&D.

Planned innovations in educational R&D

Among the main desiderata for further development of educational R&D in Switzerland, the following have reached the stage of proposed or planned innovations:

- The Swiss Conference of Cantonal Directors of Public Instruction has published a first planning report concerning the new type of teacher training institution (HEP). The HEPs will also be a new, additional type of educational R&D institution: R&D will be closely linked to teacher training (reflective teacher, practician-researcher). This will also add a new dimension to the relationship between the teaching profession and educational R&D.

- There are concrete proposals concerning a three- or eventually two-pole model of university-based educational R&D. At the same time, these poles will be the centres of networks formed by university and non-university institutions, more specialised than today.

- CORECHED, in collaboration with the Confederation, the cantons and all other stakeholders in the field of educational R&D, is preparing the ground for several new initiatives -- for example, the regular launching of educational R&D projects undertaken at national level; new mechanisms for the financing of national projects or Swiss participation in international projects; and the development of medium-term strategic objectives for the development of educational R&D at national level.

- CORECHED will bi-annually produce a report on the condition, development and perspectives of educational R&D in Switzerland.

CHAPTER 7. **RAPPORTEUR'S REPORT**

by
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A presentation of the three case studies of educational R&D "systems" in Austria, Switzerland and Germany began the seminar, followed by comparisons between them. As the seminar progressed, these systems were reviewed in a wider international context. The ultimate goal was to consider how understanding the three systems -- if this term applies -- can illuminate current issues concerning national educational R&D policies in general.

Over the three days, several basic themes emerged quickly. As these themes appeared, and then reappeared in various forms, they began to suggest questions -- questions for which the most obvious answers are somehow suspect. Six of the most prominent themes are presented below, followed by five questions accompanied by long with some speculation about why the answers continue to be elusive.

Researchers, policy-makers and practitioners: three communities in one system

An educational R&D system cannot exist without researchers, policy-makers and practitioners. Research must take place, decisions need to be made about support and direction for that research and its implementation, and practitioners must attempt to put into practice knowledge gained from that research. A national educational R&D system cannot exist without the three functions that these communities serve, so there must be interaction among them even if they have different characters and purposes. Considerable friction and misunderstanding frequently exists between the three communities.

Institutional structure of educational R&D systems

The seminar examined the institutional structures of the educational R&D systems in the three countries. First, there are the research institutions themselves: education research takes place through researchers at institutions of higher education and through various kinds of free-standing independent research organisations, some of them under government auspices. Institutionalised sources of funding are also important: the national, regional and local government entities and other organisations provide support for research, along with indirect

support provided by institutions of higher education for faculty members who devote some portion of their time to doing research.

The different structures also influence the training of researchers: independent organisations, which are generally smaller, are thought to have more limited capacity to support training. They are not set up to be educational institutions, their small size makes it difficult to give access to the various kinds of training and experience provided by experts, and it is questionable as to whether even senior researchers in these organisations possess relevant qualifications to the same degree as researchers in universities.

Scope and methods of education research work

The seminar addressed the scope and methods of education research itself as it occurs within educational R&D systems. Participants acknowledged that as the R&D system grows and research findings accumulate, there tends to be greater differentiation in the background and expertise of researchers. This differentiation multiplies the opportunities to view research questions from more than one perspective, but only some of those opportunities are taken. Where researchers from different backgrounds work together, the resulting interdisciplinary research reflects a richer, more complex perspective. At the same time, the proliferation of questions and disciplines often leads to greater fragmentation in the field.

Most research focuses on some aspect(s) of the teaching and learning situation in primary or secondary education classrooms. Some research investigates out-of-school factors and activities and their effects on educational attainment and achievement, and some is carried out at the university or college level. The most common divisions of education research partition it into three categories of *i)* formal primary and secondary education, *ii)* higher education, and *iii)* vocational education. Participants recognised the merits of crossing over these boundaries to see how findings in one area may illuminate research inquiries in another.

The methods of education research practised in the three countries include purely theoretical research, empirical analyses, qualitative research, teacher/researcher partnerships or action research, and longitudinal studies. Not surprisingly, it was noted that research suitable for being conducted from an armchair is less expensive, less time-consuming and less demanding of co-ordinated effort than is large-scale empirical longitudinal work. Unfortunately, longitudinal research offers greater prospects than more speculative work for testing theoretical claims or for providing evidence that specific educational interventions have any discernible effects.

Comparative complexities of educational R&D systems

The seminar demonstrated that educational R&D systems are not singular entities wholly like or unlike one another. Each of the three systems had some things in common with the others, and some things that distinguished them. Efforts to compare the three case studies quickly revealed the complexities of drawing significant comparisons that go beyond the particular features of the systems under discussion. There is little basis for optimism about

grouping national R&D systems as whole entities into discrete types or kinds in which the members of one kind of system share a family of common characteristics distinguishing them from systems of another kind. On the other hand, this suggests that there are likely to be common elements in any two systems, and therefore something to be learned from almost any comparison.

For example, Switzerland is more uncentralised than either Austria or Germany, where the relative autonomy of the local cantons result in their independent operation. As the Swiss participants noted, this situation makes their system prone to provincial attitudes, duplication of effort across the cantons, and lack of co-ordination. With such a decentralised system, the Swiss are challenged to identify a meaningful national role for educational R&D policy. For the more centralised German and Austrian systems, the balance shifts toward the challenge of being adequately responsive to local needs or initiatives. Collectively, the three countries represent a range of policy environments in which local, regional and national policy interests exert some influence and where the relative strengths of those influences are uneven.

Switzerland and Austria are much closer to each other in the scale of their R&D systems in terms of personnel and spending, than either one is to Germany. The case-study reports indicate that personnel time devoted to education research in Germany is roughly ten times that of either Austria or Switzerland. The size of the German system means that its potential for a balanced and diversified portfolio of research work is greater, while the Austrian and Swiss research communities must grapple more often with situations in which important research questions go unstudied. At the same time, the greater size of the German system creates the risk of redundant work, albeit in a different form than the Swiss problem of decentralisation.

Germany and Switzerland have engaged in national self-evaluations of their respective systems within the last decade, whereas this seminar was viewed as a first step in a similar process of self-evaluation for Austria. The advantage of having a national report is seen in better and more comprehensive information, which allows policy-makers and researchers to assess and react to the real strengths and weaknesses of their systems. The advantage of the early stage at which the Austrians stand is that in addition to obtaining the kind of information already possessed by the other two countries, the activity of developing such a report promises to draw greater public and policy attention to the status of educational R&D in their country.

These simple comparisons bear directly on the R&D systems' capacity to differentiate research work and respond to the challenges of assembling a co-ordinated, coherent approach to educational problems. Any number of other comparisons may be drawn from the case-study reports, some of which are already provided in earlier chapters. What makes the comparisons difficult, however, is that the various differences and similarities are related to one another, and consequently the analyses of the comparisons quickly find that they have to take into account all elements of the systems. While policy decisions are often targeted at a specific feature of the system, the repercussions of those decisions are bound to be complex.

Impact of fate on educational R&D systems

The historical and cross-cultural dimensions of the seminar demonstrated how realities outside of the educational R&D system may often determine important developments in that system. For example:

- The existence of several sizable and historically entrenched cultures with different primary languages in Switzerland obviously influences the uncentralised character of the Swiss R&D system.

- The recent reunification of two parts of the German nation whose economic and political systems had undergone dramatically different histories in the decades during their separation continues to cause significant readjustments between the elements comprising the present system.

- The period, roughly two decades ago, of general public disillusionment with education research's capacity to improve the education systems in the respective countries hindered the growth of their R&D systems for a significant time.

- General economic developments within the three countries have affected the educational R&D systems. Most obviously, the ups and downs of the national economy affect the rise and fall of funding levels for the R&D system, especially from government sources. In addition, technological innovations and other changes lead to alterations in the demands on the education system, in terms of what knowledge and skills become necessary or obsolete for skilled workers entering the workforce. Consequently, the educational R&D system reacts to new needs surfacing in the education system as it adapts to the economy's new demands for workers trained in particular ways.

The larger social and historical context constantly intrudes upon the status and welfare of the educational R&D system. Taking three case studies together in which their respective national histories are different draws out the importance of recognising that even a good grasp of the educational R&D system by itself is insufficient. What was already complex becomes even more so.

Contestable quality of educational R&D system descriptions

The seminar created considerable disagreement among participants over the state of affairs in each of the countries, what led to it, and how it should be evaluated. The Austrian case study, for example, caused a lively discussion about the relative merits of university and non-university research institutions, particularly with respect to unwanted influences exerted by policy-makers that threaten to bias the research findings, and the questionable capacity of these relatively small non-educational institutions to train their research personnel adequately. The German case study, too, provoked a series of disagreements about the current status of the German R&D system, with considerable implications for the assessment of its current level of vitality.

It is plain that part of the challenge of making international comparisons of national educational R&D systems is the need to determine the accuracy and adequacy of the analyses reported. This turns out to be a formidable task. At numerous points during the seminar, participants called for the development of internationally comparable data, related to educational R&D systems and to the functioning of national education systems themselves. Obviously, such data would significantly advance the ability to understand educational R&D and its relation to the success of the education system. As long as the data is questionable or inadequate and questions remain unanswered, any speculative judgements about the quality of the various systems remain vulnerable to misunderstanding or misinterpretation. At the same time, the disputes themselves contributed to better understanding: the back and forth among the participants setting out rival points of view painted a more detailed and multifaceted image of the R&D systems under scrutiny. The conflicts brought the seminar to a fuller understanding of the facts and of the issues.

These six themes should not surprise even the moderately informed reader. They deserve mention because they did indeed shape a large portion of the seminar discussions and because they are the stuff from which comparative statements are made about educational R&D systems around the world. Detailed presentation and analysis of the three systems are provided in the three case studies themselves and in the other reactions and perspectives presented in the course of the seminar. Rather than reiterate their contents in a manner that still falls short of the originals, the remainder of this chapter speculates on why the seminar's discussions dwelled on some topics and not on others.

Questions and answers

As the seminar progressed, the various discussions raised questions about prospects and strategies for reforming the educational R&D system. In some cases, answers came quickly, but the implications of accepting them at face value were not entirely positive. Consequently, those questions, and the answers which present themselves, deserve a second hard look. Policies and practical reforms that are created in response to these questions may well determine the capacity of the R&D system to perform better, or worse.

Why do we behave as if leaving out the practitioners is legitimate?

Researchers, policy-makers and practitioners form the three professional communities which compose and are most directly affected by the educational R&D system. The policy-makers identify priorities, set requirements, determine funding levels and otherwise pursue policy objectives. The researchers engage in systematic efforts designed to contribute to the understanding of how education takes place, and how to improve it. And the practitioners turn to research findings as a resource in their direct efforts to promote the learning of students. Each community is a stakeholder. At the seminar, however, only two of the three stakeholder communities were represented; when the rapporteur general asked the seminar participants to identify their membership in a community, with the exception of one lonely teacher the rest were about evenly divided between policy-makers and researchers. This was no accident. Why were researchers and policy-makers invited but not practitioners?

One answer could be that practitioners have nothing important to say on this topic. Their talent lies in their ability to educate students, not to assess the research findings and policy decisions which shape and inform their practice or to reform the institutional infrastructure of the R&D system. Consequently, there is no need to ask them to reflect upon the various aspects of their own country's R&D system, much less anyone else's. Practitioners may be able to identify their own practical problems, but the way in which they frame those problems does not lead to researchable questions or to constructive policy decisions. Policy-makers and researchers have their own ways of identifying the problems, and together they should determine what policy decisions and research work are called for.

A second answer could be that practitioners are left out because of their inferior social status in relation to policy-makers and researchers. The greater professional autonomy, prestige, power and salaries attached to policy making and research explain why the other two communities obtain representation while the practitioners do not. In other words, researchers and policy-makers have an interest in not sharing with practitioners the decision-making process of identifying the important issues and allocating resources to solve them, and they have the power to keep the practitioners out.

What justifies the claim that strengthening the R&D system will improve education?

Throughout the seminar, participants appeared to assume that the health of the national educational R&D system is positively related to the (future) quality of the national education system. Strengthening the R&D system, it was frequently implied, would lead to benefits in the quality of education. Certainly, this is a felicitous conclusion for all concerned, but the evidence for such a finding should be examined.

The three types of evidence regularly provided to support the claim that education research can improve practice are highly suspect. The first type consists of inputs: objective measures showing increases in the allocation of funding and other resources to support education research must mean that more and better research will result. As one expert noted, policy-makers are not enthusiastically persuaded by evidence of improvement in the education system presented in terms of inputs. While it is understandable that some of those concerned will rejoice at the news that more money and other resources are available, this does not necessarily mean greater achievement in research or in education. It may only mean that more money is being wasted!

The second type of evidence comes from results of investigations into the effects of research-based innovations in particular studies, which showed that learning outcomes were greater. Such evidence is preferable to input evidence insofar as it directly reports gains in learning. Until they can be effected and reported on a wide scale, however, such gains represent an essentially anecdotal status from the standpoint of a policy-maker; they are nice success stories that warm the heart and charm the imagination, but they don't necessarily mean that students as a whole are doing better. At the national level, at least in the United States, the trend data on student achievement and attainment reflects little improvement, if any, and the basis for attributing better results to the contributions of research is quite shaky (Mullis *et al.*, 1990).

The third type of evidence for the relationship of research to practice is one that can demonstrate change and differences in practice that are attributable to research. In the United States, two recent and influential examinations at the national level of research and education both pointed proudly to widely adopted education reforms, the qualities of which reflected the findings of accepted research (National Academy of Education, 1991; National Research Council, 1992). While these reports make a fairly strong case for the idea that research has *changed* the educational landscape, however, they do not prove that these changes have made education in the United States any *better* than it was before.

Taken together, these three types of evidence create a picture very much like the kind of positive programme evaluations that researchers usually deplore: huge resource expenditure, a few anecdotal success stories, something different is going on -- but where, asks the rigorous empirical researcher, is the evidence of improvement? Are researchers and policy-makers in the position here of school personnel who have recently devoted substantial time, energy and resources into implementing educational reforms -- that is, blindly biased in favour of strengthening research because they are the ones who carried it out and who would benefit from additional resources?

The comparison with medical research may be instructive here, because in medicine the case for genuine progress is so much stronger. Over the last century, there is good evidence that research-based advances in medicine have actually improved health. People now live considerably longer than they used to and with less suffering and loss of functional capacity. Strong scientific explanations for how medical advances have contributed to these improvements are available: research led to the discovery of germ theory, to the development of certain sanitarial practices, antibiotics and other drugs, and the widespread use of these measures contributed to dramatic reductions in early mortality from certain diseases. Research in medicine has certainly led to a more effective medical system and improved health in society. The investment has paid off.

Can investing in educational R&D be justified in the same way? It is far from clear that the answer is yes, but some reasons for responding positively may be given.

One argument would be that the investment has not paid off yet. Medical investigations have been pursued for thousands of years, yet dramatic progress has only occurred within the last century. If we accept the notion that killing some lethal viruses and bacteria is an inherently simpler task than improving human learning, it stands to reason that the benefits of education research will require a longer and greater commitment than that devoted to medical inquiry. It could even be suggested that the current prospects for education research are even better than those for continued progress in medicine, if we apply the adage offered by one seminar participant: that the most important cause of problems is solutions. Since medicine has solved the simpler causes of medical complaints, it is now faced with the more daunting task of overcoming such problems as cancer and heart disease, in the context of a public that is used to seeing significant progress. For education, the easiest problems still await solution, while public expectations are comparatively low.

This view clearly rests on the presumption that medicine and education are analogous in crucial respects, which is not particularly healthy support for glowingly positive prognoses

for educational improvement. While participants acknowledged the value of the health and medicine analogy, some went to great pains to point out the differences that make useful comparisons suspect: the objectives of education are less clear than those of medicine, and call for public dialogue; the orientation of the medical model is more directly instrumental than that of education; the process of learning has greater intrinsic significance than have therapeutic interventions; the public's concern about the untoward effects of bad medicine is more grave than their concern about those deriving from a lack of education. It may be added that medical therapy is often thought to be generally more painful than undergoing education -- although some students might have differing opinions on this point!

Some of these differences between education and health care are undeniable, and perhaps they are as illuminating as the similarities. The fear of pain or death goes some way toward explaining greater public support for medical rather than education research. But even modern medicine is not able to do all that society would like it to do, and the directions that national health care policy and research should pursue also present serious questions for public debate. The lesson to be learned here is that the similarities and the differences between medicine and education are instructive. This is because both medicine and education involve service delivery systems in which everyone has an interest, they require the allocation of substantial resources, and significant aspects of them are controlled by government policy.

Another way to look at the question of justifying educational R&D expenditure is to ask whether the argument for it should be sought on other grounds. The empirical evidence ordinarily used to support scientific claims is not the only basis on which knowledge claims are made. Logic and practical knowledge are also employed to justify claims to truth. Of course, the kinds of reasoning and evidence acceptable in this arena would have to be specified, as well as the standards or criteria to be used to judge such arguments, and this would be a formidable task.

It may be that the strongest argument presently available is an interpretive one, in which education is described as a kind of human activity that is characteristically amenable to reform, and that the kind(s) of knowledge generated by research can improve the quality of that activity. Furthermore, it could be argued that evaluation and assessment research strategies are not yet sufficiently well developed to claim that education has not improved, because existing measures are not sufficiently sensitive or discriminating. It was suggested that the dedication to speculative, historical or systematic philosophical education research in Germany, Austria and Switzerland has been due in part to scepticism about the value of more empirically oriented research; if so, the constituents of the educational R&D structures in these three countries may find this alternative especially appealing. In the short run -- the next hundred years or so -- this task is worth pursuing if more convincing arguments for the value of strengthening educational R&D are to be put forward.

What is wrong with researchers, policy-makers and practitioners?

Throughout the seminar, researchers, policy-makers and practitioners were frequently castigated for their shortcomings, sometimes by their own admission and sometimes by

nbers of the other two communities. The following allegations were made over the course of the discussions and presentations, some more than once:

Policy-makers

- are narrow-minded and ideological
- are ridiculously impatient
- make decisions irrationally
- make decisions affecting the educational R&D system that are based on external societal considerations
- lack insight
- use research to rationalise what they have already decided to do
- refuse to relinquish control
- make faddish funding decisions
- are lawyers who do not understand research
- are excessively rule-oriented
- are short-sighted
- know what they do not like, but cannot say what they could use

Researchers

- are narrow-minded and ideological
- take too much time to do anything
- do not have all the answers
- make authoritative claims in areas outside the range of their expertise
- think they are always right and that there is no need to present the basis for their opinions
- do what they want to do, not what they should do
- always want more money

- engage in faddish research
- lack any common sense
- ignore the complexities of policy decision-making
- accept the existing system as given
- display methodological fetishes
- embrace novel institutions uncritically
- allow themselves to be bought by funding agencies
- use hit-and-run tactics that exploit practitioners
- promise too much
- present recommendations that are practically irrelevant, too limited, and out-of-date.
- design research projects to enhance their own personal reputations
- do not care about dissemination
- do not communicate or collaborate with each other
- are reluctant to study their own behaviour, either as researchers or as practitioners
- do not understand ordinary classroom teaching

Practitioners

- are narrow-minded and ideological
- often blindly follow bad advice
- frequently ignore good advice
- do not change their habits, for anything
- are cowed by political authority

Taken together, these qualities suggest that the workings of the educational R&D system are fraught with vicious and mean-spirited doings. Some of the accusations may well be true, and that the fact that policy-makers, researchers and practitioners are perceived as such is a serious problem. What can be done to correct the situation?

One option is to try to reform the characters of the individuals themselves. By making them more empathetic, patient, diligent, rational, etc., one could improve their interactions, and the system would function better as a result. Unfortunately, research findings on the effectiveness of existing moral education programmes offer little cause for optimism about this strategy. There are no well-evaluated programmes to replenish the moral character of policy-makers, researchers and practitioners, even if they could all be persuaded or compelled to undergo them the way younger students are. This does not mean that the idea of training and education in ethics is entirely fruitless for these purposes, but it does mean that unless there are other strategies to try too, the prospects for moral renewal in educational R&D are very dim.

A more promising possibility is to reform the institutional arrangements which shape the relations between researchers, policy-makers and practitioners in ways that encourage them to act more ethically. The R&D system's institutions could be reformed to use policies and procedures that provide incentives for good behaviour, discourage bad conduct, and foster better understanding of the characteristic constraints which result in objectionable comportment.

The Swiss report gave an example of collaboration between teachers and researchers, in which both parties could develop a better understanding of the other's situation, learn empathy for each other's vicissitudes, and even tailor their own activity to better suit the needs of the other. A different strategy in Australia was described, in which researchers were compensated for participating in an agenda-building activity in co-ordination with policy-makers and practitioners, which addressed the needs of the policy-makers and thus induced them to feel more responsible for using whatever resulted from the research agenda.

Other illustrations come to mind: in the United States, the reauthorisation of the Office of Educational Research and Improvement mandates the examination of the Office's peer review process, which has included the participation of researchers, practitioners and policy-makers as reviewers of research grant applications. Exactly how to accomplish this, however, involves some complex policy and procedural issues.

A second idea, in response to the problem of evaluator bias in favour of the funding agent, is to structure the evaluation exercise in such a way as to deliberately neutralise a funding agent's interest in the outcome: the agent could be encouraged to authorise the evaluation of several comparable programmes, preferably for all of which he had sympathies.

At several points during the seminar there was discussion of what model should be used to describe and reform education research. Participants expressed dissatisfaction with a linear model, in which research is said to move in stages, from basic to applied, applied to development, development to implementation in policy and practice. This model was seen to encourage a segmentation of the process in which researchers, policy-makers and practitioners each performed their own function at some point in the process, with little collaboration between them. No clearly defined conceptual model was advanced, but there was widespread receptivity to the notion of alternative model(s) in which research and researchers, policy and policy-makers, practice and practitioners, were all involved.

In the short run, efforts to reform the institutionalised relationships among the three communities are bound to produce confusion and misunderstanding. Without a generally agreed-upon model, roles will not be clearly distinguished and expectations of how each should behave may be disappointed. Researchers might view this as an invitation to enter fully into the debate about the goals of education, and feel entitled to make policy. Practitioners could take it upon themselves to judge the merits of research designs and findings. Policy-makers might decide that they understand teaching as well as anyone does. And the ideological biases may become more manifest. Some survey analysis research in the United States has shown that in the field of social studies education, the academic professionals who write textbooks and prepare high school teachers tend to have different ideological views from the teachers themselves; the normative lessons American students are taught in social studies classes may well be inconsistent as a result (Leming, 1992). One is tempted to believe that Austrian, German and Swiss researchers, policy-makers and practitioners will face similar predicaments arising out of their respective ideological interests.

Is there a way to improve co-ordination, collboration and dissemination by reconstructing the educational R&D infrastructure?

Throughout the seminar, participants offered promising illustrations of improved co-ordination, collaboration or dissemination, and proposed ways to enable their widespread practice. However, it would be a mistake to proceed as if all desired improvements are possible and able to be realised simultaneously. Hard choices are inevitable.

As an example of how researchers and policy-makers work together, a Swedish participant recounted an anecdote about a policy-maker who repeatedly shortened the amount of time he was willing to give to a researcher from whom he had requested findings related to a policy question; the policy-maker eventually made the researcher provide the information verbally in only three minutes, with nothing in writing. This example suggests that policy-makers do not always welcome research results in the way that researchers traditionally do, but rather are only receptive to information offered to them in specific forms, from particular kinds of people, for particular purposes, and at particular points in the decision-making process (Weiss and Vickers, 1992). Policy-makers prefer oral to written presentations, and the shorter the better. They prefer to hear them from such people as staff, interest-group representatives, or people in policy-maker networks whose ideological biases are fairly certain, and not from the researchers themselves. They accept research information only when it is useful to them, usually at some stage in a policy-making process and often when they have already made up their own minds about where they stand on a policy question, rather than approaching the issues in some ostensibly impartial scientific fashion. What this suggests is that policy-makers and researchers can collaborate, and researchers can disseminate their work, but only if they recognise and work within the practical constraints of the needs, learning styles and preferences of their policy-making audience.

Educators provide a different kind of example of people whose attitudes impose conditions on researchers working with them to improve the effectiveness of their instructional behaviour. A Swiss participant reported on an initiative in which researchers

committed themselves to working with teachers for a sustained period of time on such a project, which was showing some promise of success. Here again, the researchers' traditional forms of disseminating their findings, i.e. the journal article, or at best an instructor's guide or manual, was rejected in favour of a strategy that seemed to have a better effect on the person applying the research recommendations. Sometimes teachers prefer to look to other teachers for help when they need it rather than to research, because they feel their colleagues will have had similar experiences and possess a shared understanding of their practical needs. What the Swiss example suggests is that researchers who work with teachers can also develop such a common understanding through which they can then share relevant research.

These two illustrations imply several points about successful collaboration, co-ordination and dissemination within and beyond the research and development infrastructure. The first is that not all possible avenues are worth pursuing; the qualities, needs, and circumstances of the people who might be able to use research are such that only some ways of co-operating with them and providing them with information will work.

The second point is that here again the mutual disdain with which researchers, policy-makers and practitioners view one another can be overcome not so much by a change of heart as by reframing the institutional arrangements within which the members of these communities interact. How institutions structure interaction so as to encourage or discourage effective forms of communication will shape how well or poorly they co-operate. Policy decisions about the three parties are brought together will affect the success of the outcome, above and beyond the quality of the research findings themselves.

Finally, researchers are likely to face trade-offs; given the kinds of collaboration and dissemination they may have to use to make their research findings effective, and the wealth of interdisciplinary opportunities already available in well-developed research communities, researchers are bound to be unable to pursue every promising prospect they see. Existing institutions may serve to advance or to obstruct their opportunities.

Is harmony in the educational R&D system a good thing?

Discussions often assume that promoting harmony in the educational R&D system will make it more successful. The seminar appeared to conclude otherwise, however, just as the Australian philosopher John Anderson has suggested that the most perspicuous way to understand a social institution is to try to discern what sort of conflicts reside there. This would mean that serious conflicts of a particular kind may play an important constructive role in the welfare of educational R&D systems.

The German case study is especially worth examination in this context. It highlights several problems facing the German system, namely low productivity; fragmentation in the context of a large and differentiated set of approaches, disciplines and methodologies relevant to education research; and an unbalanced professorate composed of a high proportion of senior people in relation to the number of junior professionals (the seminar did in fact observe that there appeared to be an overabundance of interest in historical or philosophical research and a scarcity of empirical studies in the three countries).

These problems in themselves are not too serious. However, they produce a disquieting picture, because the problems reported, and those not reported, in Germany may reflect the absence of a certain kind of conflict which could be crucial to the well-being of the educational R&D system. Unlike the Austrian and Swiss cases, where there are problems both within and between the three communities of research, practice and policy, the German problems seem confined to problems of academic administration.

Three normative ideals surely ought to govern the design of institutions in the educational R&D infrastructure? Firstly, the pursuit of *truth and knowledge*, which are the final aim of academia and which guide the patterns of behaviour and institutional support of researchers. Secondly, *justice*, which is the overarching objective of the regulation of public affairs in which policy-makers participate, and which constitutes the ideal standard for evaluating policy initiatives and institutional arrangements. And thirdly, an *educated people*, that schools and the rest of the education system seek to achieve. It is this goal above all that educators must use to evaluate educational institutions and practices. Together, these three ideals, and the people and institutions that they inspire, create the need for the educational R&D infrastructure, which comes into being where the three interests meet, and where institutions are designed to serve them.

Where they meet, these ideals sometimes come into conflict. There is no guarantee that what serves the interest of advancing truth, say, will always coincide with society's overall educational objectives; resources that might have been used to speed the advances of scientific inquiry may need to be channelled toward developing the skills of the entire workforce. And arguments over the distribution of research funds between basic and applied research are often thinly veiled debates about what society owes academia and what academia owes society. When such debates take place, they compel the advocates of particular ideals to refine their arguments about how and why their particular ideal should take precedence; the standards for justifying a particular course of action become higher, because they must meet the potential criticisms of all three ideals.

Considered in the light of the three ideals germane to the educational R&D system, the limited catalogue of problems portrayed in the German case study may be seen as symptoms of a more alarming affliction. Might Germany represent a situation where the very strength of the academic ideal of generating truth and knowledge has become great enough to effectively overwhelm the policy-makers' and practitioners' ability to advance justice and education through the existing institutions of the educational R&D infrastructure? In that country, the R&D system's operations may reflect the loss of two of the three standards internal to the workings of that system, which would normally provide more powerful bases for constructive criticism of the system. The effective loss of two of those three standards would mean that decisions in favour of the purely academic interests have won out, without as serious and thoroughgoing a critical examination of their merits from any rival point of view. As a consequence, the system may have become glutted, with little chance for interests to arise that would force the system to adopt measures preserving only those activities with the highest genuine merit.

The constructive role of conflict in the seminar itself should be considered. Conflicts emerged over the presentation of the R&D systems in the three countries, and between

policy-makers and researchers regarding the nature and uses of education research in the context of policy and practice. These conflicts frequently clarified and enriched the participants' understanding of the issues, indicating that no single perspective is likely to fully represent the nature of the problems or the solutions.

Of course, this does not mean that there is virtue in simply being contrary or negative. Earlier in the seminar a point made about achieving progress in education used a cartoon illustrating one of the impossible adventures of Baron Münchhausen, in which the character of the Baron pulls himself and his horse out of the water by grabbing his own collar. The secondary meaning attached to the Baron's name is also apropos: Münchhausen's syndrome is a medical condition in which the sufferer repeatedly feigns an apparent acute illness for which surgery is appropriate, but which the treatment reveals to be a false complaint and so the patient undergoes unnecessary surgery. The dangers of finding failure where there is none are also endemic in the field of education. Attacking the educational R&D system for no good reason threatens both the critic and the system. What is called for in the evaluation of educational R&D is the same as that which keeps Baron Münchhausen on his horse and makes for a good waltz: balance!

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Annex 1 Agenda

4 October 1994 Arrival and registration

5 October 1994

09.00 - 12.00 **Opening Session**

Chair: Ms. Elfriede Tajalli, Austria

-- Mr. Johann Burger, Federal Ministry for Education and Arts, Austria:
Questions for educational policy and educational research

-- Mr. Sigurd Höllinger, Federal Ministry for Sciences and Research, Austria:
Science policy and policy for educational research: How do they relate?

-- Mr. Jarl Bengtsson, OECD Secretariat:
The CERI study on educational R&D in retrospective and prospective view

-- Mr. Werner Boppel, Germany:
Statement by the Head of the German Delegation

-- Mr. Edo Poglia, Switzerland:
Statement by the Head of the Swiss Delegation

-- Mr. Karl-Heinz Gruber, Austria:
Educational R&D in Austria, Germany, and Switzerland: Differences and similarities

10.30 - 10.50 Coffee break

-- Mr. Torsten Husén, Sweden:
Policy-oriented educational R&D: An international perspective

-- General discussion

12.00 - 13.30 Lunch

13.30 - 17.00 **The Austrian Case Study**

-- Mr. Werner Boppel, Germany:
Introduction by the Chair

-- Mr. Lorenz Lassnigg and Mr. Hans Pechar, Austria:
Educational research in Austria: Country report

-- Brief reactions from Germany and Switzerland

14.45 - 15.00 Coffee break

-- Mr. Mark Frequin, Netherlands:
The Austrian approach to educational R&D seen in an international perspective

-- Plenary discussion

19.30 **Reception hosted by the Mayor of Vienna**

6 October 1994

09.00 - 12.00 **The Swiss Case Study**

-- Mr. Hans Pechar, Austria:
Introduction by the Chair

-- Mr. Armin Gretler, Switzerland:
Educational research in Switzerland: Country report

-- Brief reactions from Austria and Germany

10.30 - 10.45 Coffee break

-- Mr. Ulf Lundgren, Sweden:
The Swiss approach to educational R&D seen in an international perspective

-- Plenary discussion

12.00 - 13.30 Lunch

13.30 - 17.00 **The German Case Study**

-- Mr. Walo Hutmacher, Switzerland:
Introduction by the Chair

-- Ms. Brigitte Steinert, Germany:
Educational research in Germany: Country report

-- Brief reactions from Austria and Switzerland

14.45 - 15.00 Coffee break

-- Mr. Barry McGaw, Australia:
The German approach to educational R&D seen in an international perspective

-- Plenary discussion

20.00 *Heuriger*

7 October 1994

08.30 - 11.30 **Summing up and further work**

Chair: Mr. Lorenz Lassnigg, Austria

08.30 - 09.00

-- Mr. Karl-Heinz Gruber, Austria:
The specificity of Austrian, German and Swiss educational R&D examined in an international perspective

09.00 - 09.30

-- Mr. Ivor A. Pritchard, United States:
Report by the Rapporteur

09.30 - 10.00

-- General discussion

10.00 - 10.15 Coffee break

10.15 - 10.45

-- Mr. Albert Tuijnman, OECD Secretariat:
Contributions to the draft synthesis report and next steps to be taken in view of the final conference in the Netherlands

10.45 - 12.00

-- General discussion (continued)

12.00 End of seminar

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